

# Data Storage

## Binary Notation

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# Binary Notation

## **Recall Base 10**

- ✓ 375
- ✓ Unit, tens, hundred and 10 to the power

# Binary Notation

## Binary

## Numbers

- ✓ quantity associated with each position is twice the quantity associated with the position to its right

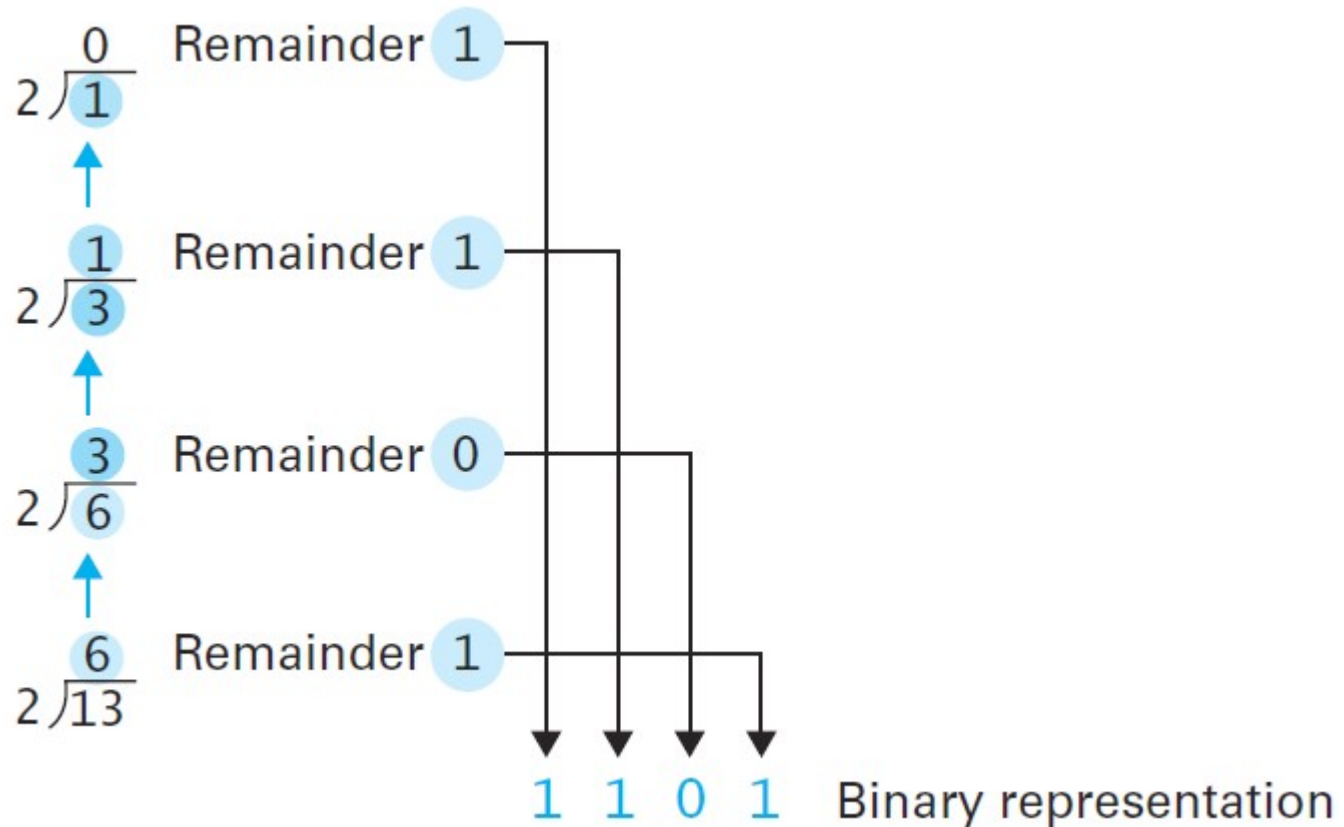
# Binary Notation

## Positive Decimal

- Step 1. Divide the value by two and record the remainder.
- Step 2. As long as the quotient obtained is not zero, continue to divide the newest quotient by two and record the remainder.
- Step 3. Now that a quotient of zero has been obtained, the binary representation of the original value consists of the remainders listed from right to left in the order they were recorded.

# Binary Notation

## Applying Algorithm



# Power Method Revision

$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$	Representing
<b>12</b>	<b>6</b>	<b>32</b>	<b>16</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>1</b>	
<b>8</b>	<b>4</b>							
1	0	0	0	0	0	1	1	131
0	1	0	1	1	0	0	0	88
0	0	0	0	1	1	1	1	15

# Summary

**Binary**

**Notation**

✓ Division

Method

✓ Power Method